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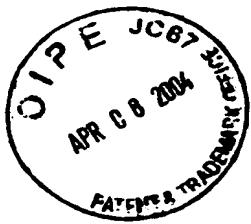
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## SDS-PAGE SERUM PROTEIN PROFILE OF REMSD RAT

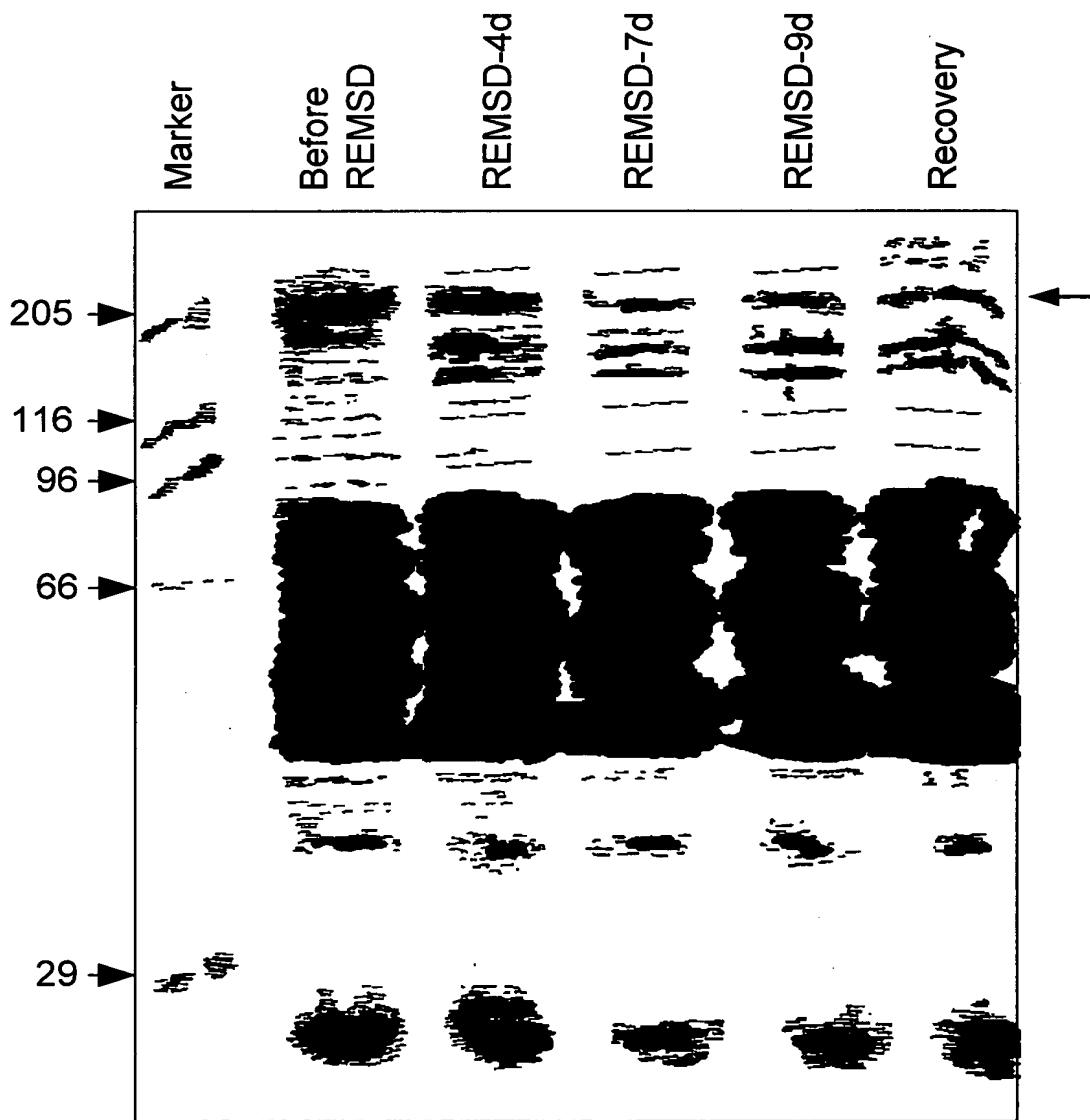


FIG. 1

1-D SDS PAGE SERUM PROTEIN PROFILE OF LPC AND REMSD RAT

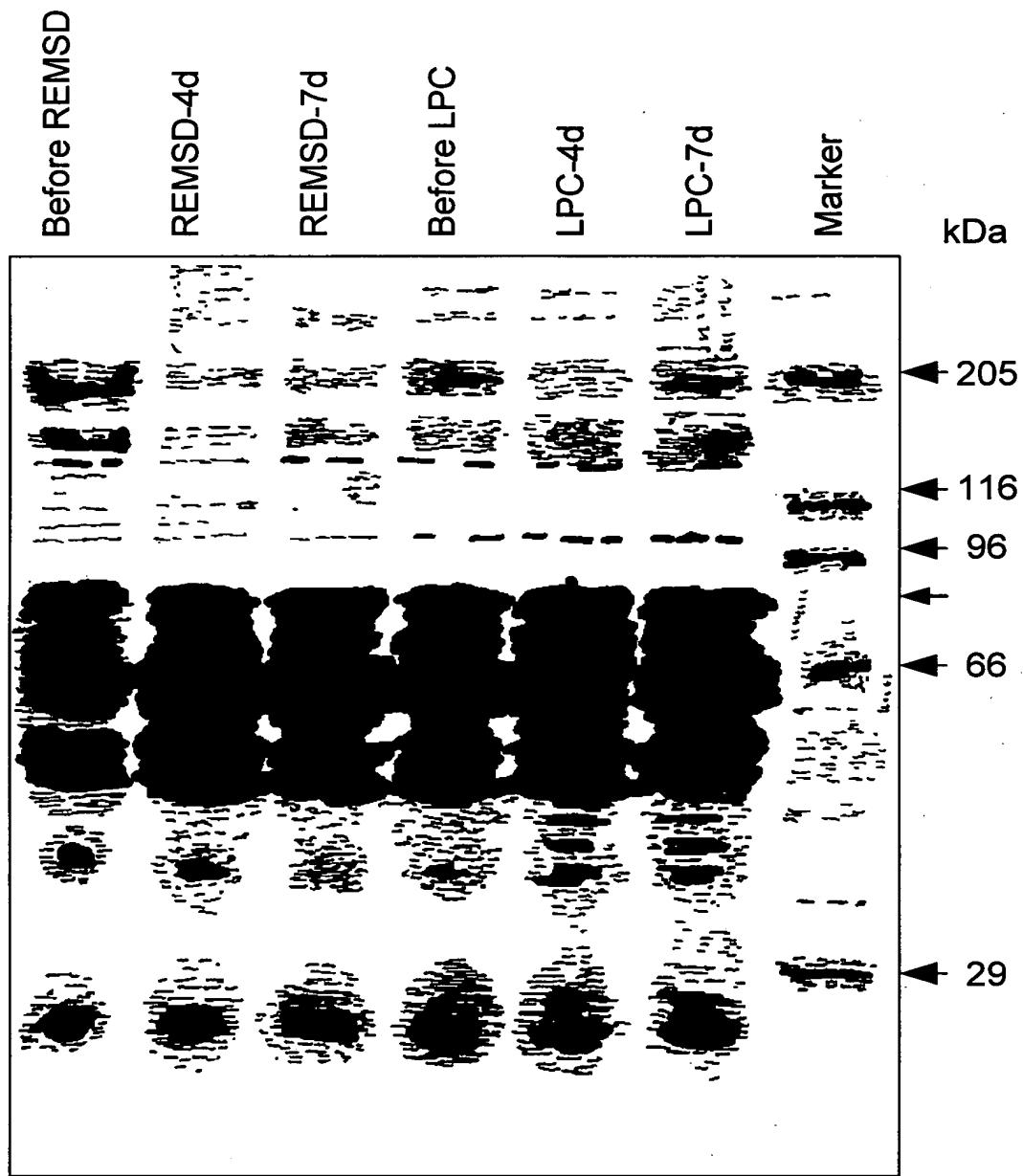
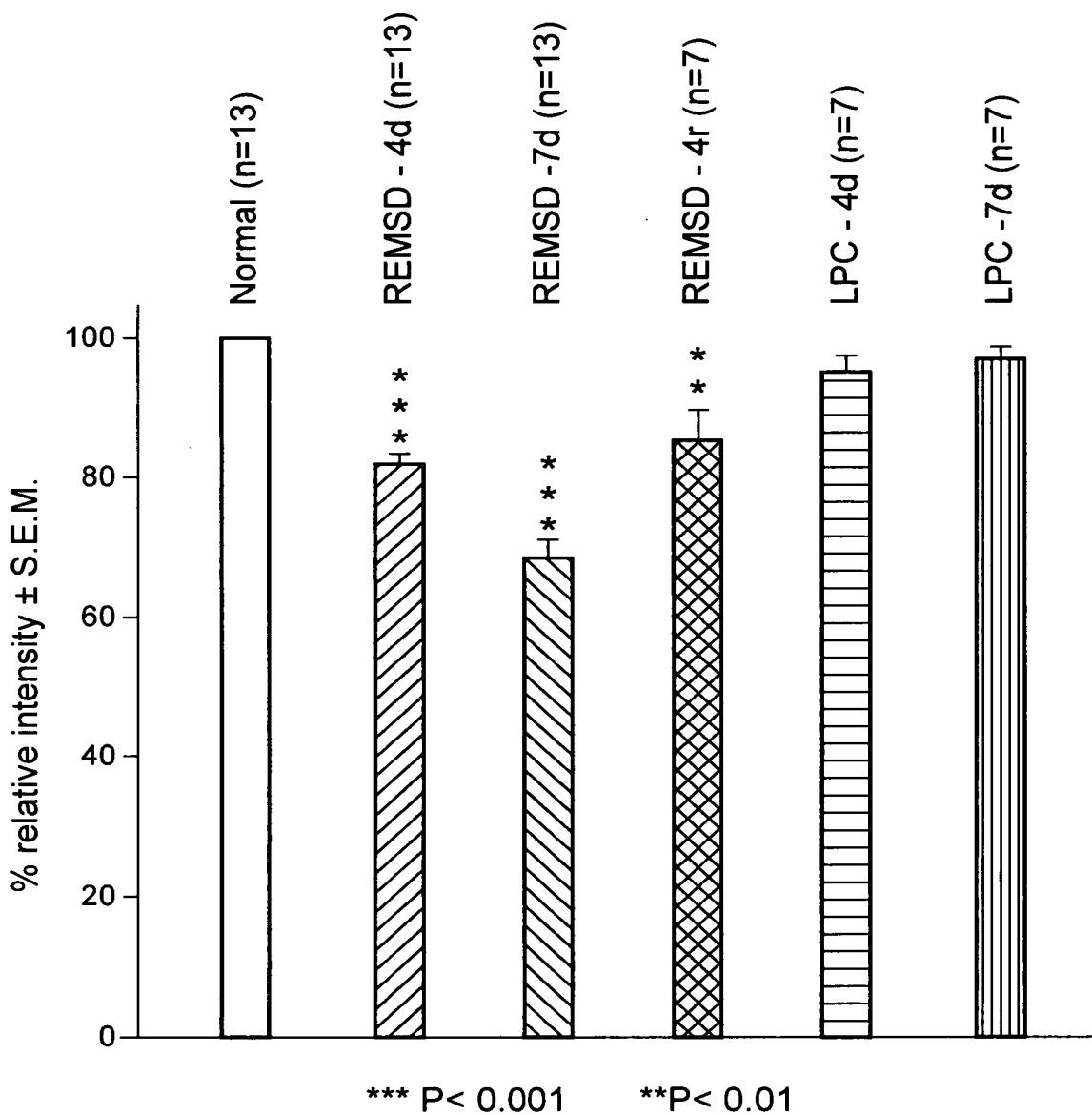


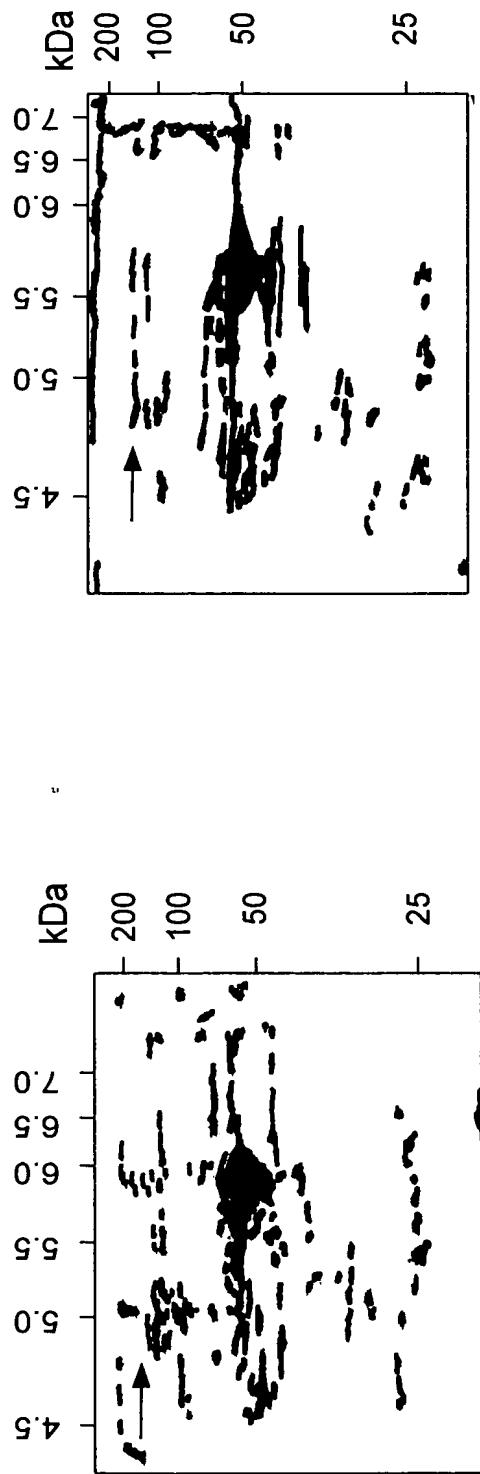
FIG. 2

RELATIVE INTENSITY OF THE A~200 kDa PROTEIN BAND  
IN 1-D SDS PAGE



F I G. 3

Two-dimensional SDS PAGE serum proteins profile of one rat on different days, before and after REM sleep deprivation and also after recovery from REM sleep deprivation.



REMSD-RAT1-0D:

Serum sample obtained just before  
the start of REM sleep deprivation

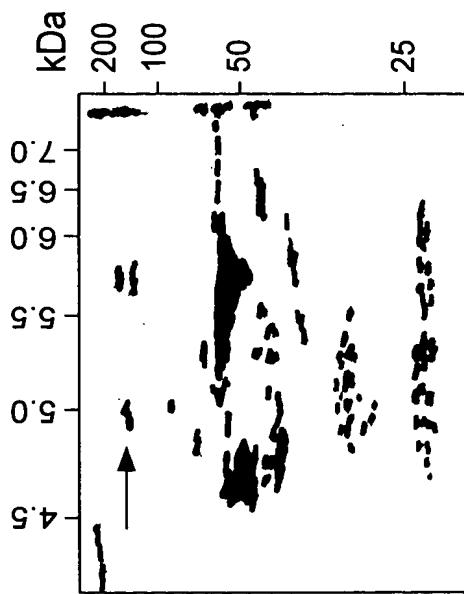
REMSD-RAT1- 4D:

Serum sample obtained after 4  
days of REM sleep deprivation

F | G. 4A

F | G. 4B

Two-dimensional SDS PAGE serum proteins profile of one rat on different days, before and after REM sleep deprivation and also after recovery from REM sleep deprivation.



REMSD-RAT1-7D:

Serum sample obtained after  
7 days of REM sleep deprivation

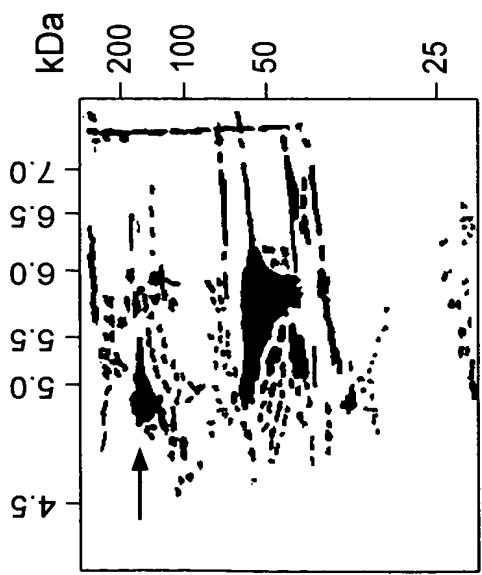
F I G. 4C

REMSD-RAT1-4R:

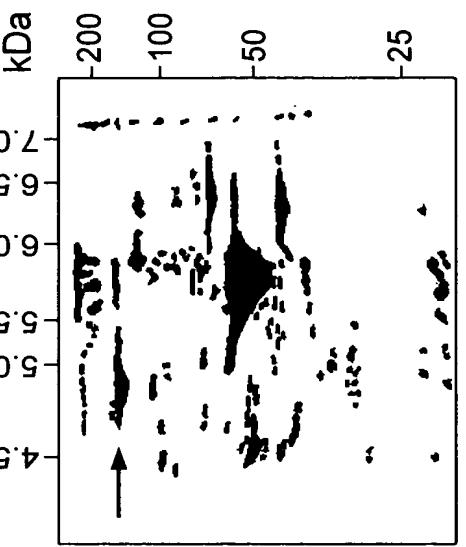
Serum sample obtained after  
4 days of recovery from 7 days  
of REM sleep deprivation

F I G. 4D

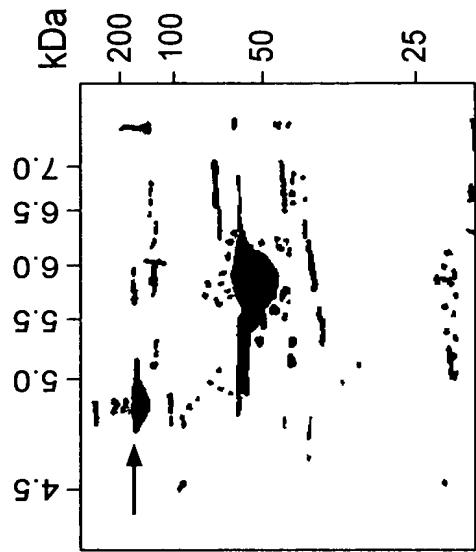
**Two-dimensional SDS PAGE serum proteins profile of one rat on different days, before and after it was put on large platform.**



F I G. 5A

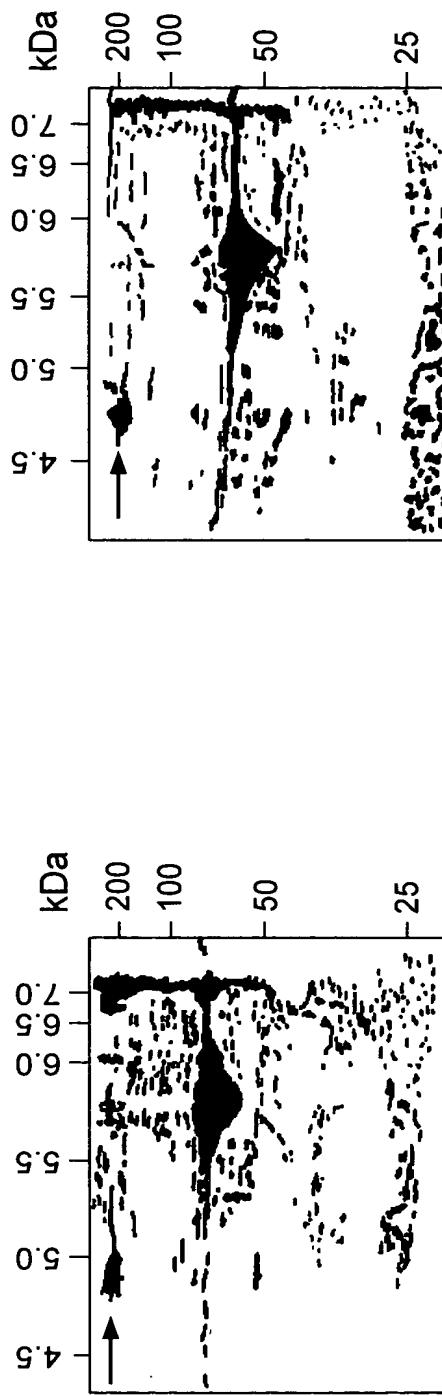


F I G. 5B



F I G. 5C

**Two-dimensional SDS PAGE serum proteins profile of one rat before  
and after it was put for vigorous swimming.**



**CS-RAT2-0 Hr**

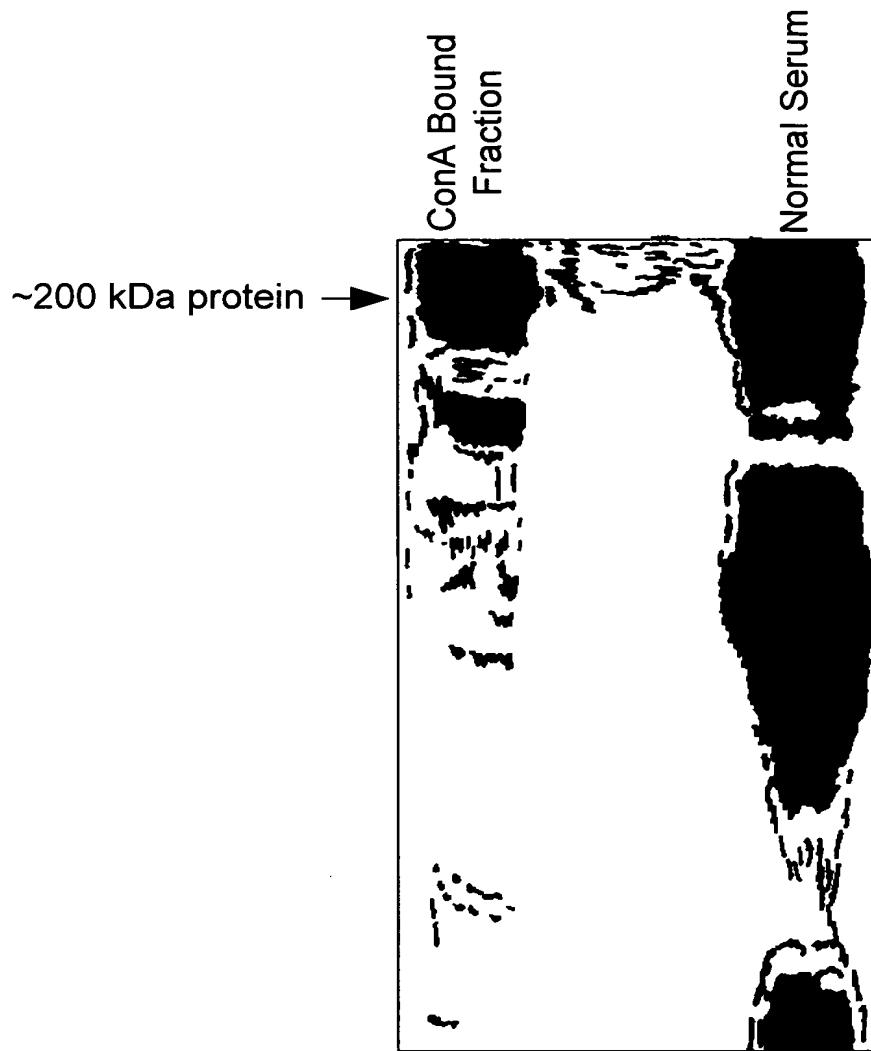
Serum sample obtained from the SC rat  
just before the rat was put for swimming.

**CS-RAT2-6 Hr**

Serum sample obtained from the SC rat  
after six hours of continuous swimming.

**FIG. 6**

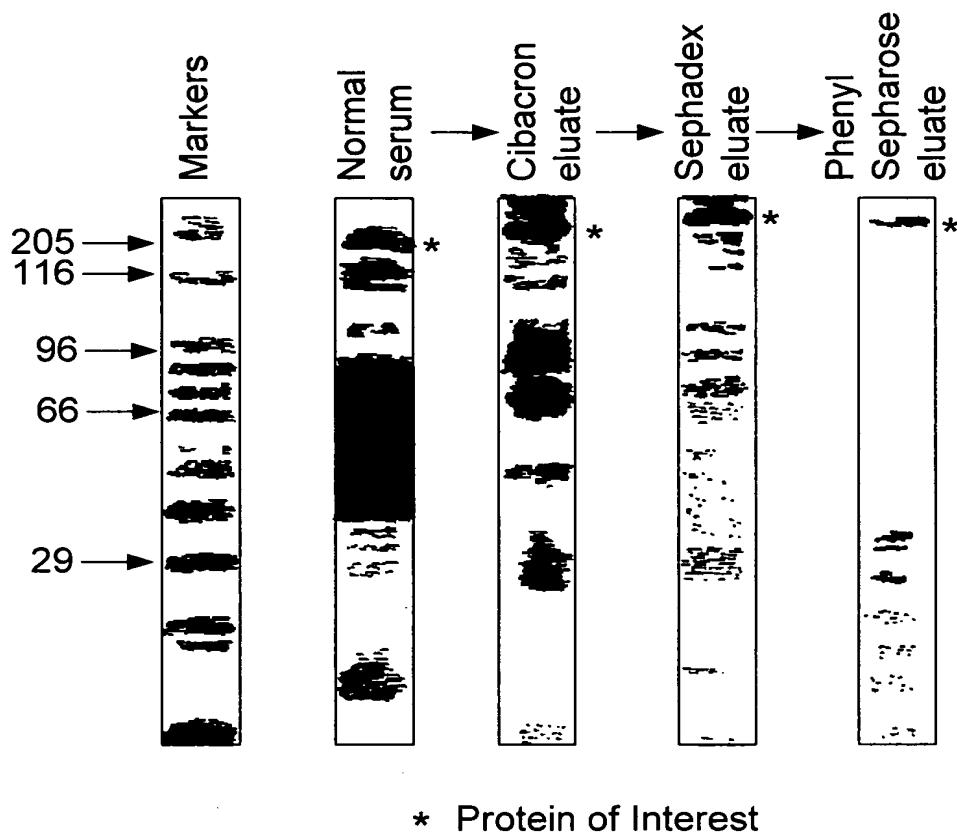
**SDS-PAGE profile of partially purified rat serum protein fraction bound to conA sepharose-4B.**



The ~ 200 kDa rat serum protein was partially purified through DEAE ion-exchange column and concentrated in centriplus-100 HR filtration unit. This partially purified material was further fractionated in the matrix bound fraction by incubating with conA sepharose-4B.

**F I G. 7**

One-dimensional SDS-PAGE of the fractions at each step after passing them through each of the three columns used to purify the protein. Fractions of interest from each column were pooled to be run in the next column.



\* Protein of Interest

F I G. 8

10	20	30	40	50	60
KKDREAQLC	LFSALLAFLP	FASLLNGNSK	YMVLVPSQLY	TETPEKICLH	LYHLNETVTV
70	80	90	100	110	120
TASLISQRGT	RKLFDDELVVD	KDLFHCVSFT	IPRLPSSEEE	ESLDINIEGA	KHKFSERRVV
130	140	150	160	170	180
LVKNKESVVF	VQTDKPMYKP	GQSVKFRVVS	MDKNLHPLNE	LFPLAYIEDP	KMNRIMQWQD
190	200	210	220	230	240
VKTENGLKQL	SFSLSAEPIQ	GPYKIVILKQ	SGVKEEHSTF	VMEFVLPRFG	VDVKVPNAIS
250	260	270	280	290	300
VYDEIINVTA	CATYTYGKPV	PGHVKISLCH	GNPTFSSETK	SGCKEEDSRL	DNNGCSTQEVE
310	320	330	340	350	360
NITEFQLKEN	YLKMHQAFHV	NATVTEEGTG	SEFSGSGRIE	VERTRNKFLF	LKADSHFRHG
370	380	390	400	410	420
IPFFVKVRLV	DIKGDPPIPNE	QVLIKARDAG	YTNATTTDQH	GLAKFSIDTN	GISDYSLSNIK
430	440	450	460	470	480
VYHKEESSCI	HSSCTAERHA	EAHHTAYAVY	SLSKSYYIYLD	TEAGVLPCNQ	IHTVQAHFIL
490	500	510	520	530	540
KGQVLGVLQQ	IVFHYLVMQA	GSILQTGNHT	HQVEPGESQV	QGNFALEIPV	EFSMVPVAKM
550	560	570	580	590	600
LIYTILPDGE	VIADSVKFQV	EKCLRNKVHL	SFSPSQLPA	SQTHMRVTAS	PQSLCGLRAV
610	620	630	640	650	660
DQSVLLQKPE	AELSPSLIYD	LPGMQDSNFI	ASSNDPFEDE	DYCLMYQPIA	REKDVYRYVR
670	680	690	700	710	720
ETGLMAFTNL	KIKLPTYCNT	DYDMVPLAVP	AVALDSSTD	GMYESLPVVA	VKSPLPQEPP
730	740	750	760	770	780
RKDPPPDKPV	IETIRNYFPE	TWIWDLVTWV	SSGVTELEM	VPDTITEWKA	GALCLSNDTG
790	800	810	820	830	840
LGLSSVASFQ	AFQPFFVELT	MPYSVIRGEA	FTLKATVLNY	LPTSLPM AVL	LEASPDFTAV
850	860	870	880	890	900
PVENNNQDSYC	LGANGRHTSS	WLVTPKSLGN	VNFVSAEAR	QSPGPGCGSEV	ATVPETGRKD

SEE FIG. 9B

F I G. 9A

SEE FIG. 9A

910	920	930	940	950	960
TVVKVLIVEP	EGIKKEHTFS	SLLCASDAEL	SETLSLLLPP	TVVKDSARAH	FSVMGDLSS
970	980	990	1000	1010	1020
AIKNTQNLIQ	MPYGCGEQNM	VLFAPNIYVL	KYLNETQQLT	EKIKSALGY	LRAGYQRELN
1030	1040	1050	1060	1070	1080
YKHKDGSYSA	FGDHNGQGQG	NTWLTAFLVK	SFAQARAFIF	IDESHTDAF	TWLSKQQKDS
1090	1100	1110	1120	1130	1140
GCFRSSGSLL	NNAMKGGVDD	EITLSAYITM	ALLESSLPDT	DPVVKSKALSC	LESSWENIEQ
1150	1160	1170	1180	1190	1200
GGNGSFVYTK	ALMAYAFALA	GNQEKRNEIL	KSLDKEAIKE	DNSIHWERPQ	KPTKSEGYLY
1210	1220	1230	1240	1250	1260
TPQASSAEVE	MSAYVVLARL	TAQPAPSPED	LALSMGTIKW	LTKQQNSYGG	FSSTQDTVVA
1270	1280	1290	1300	1310	1320
LDALSKYGAA	TFSKSQKTPS	VTVQSSGSFS	QKFQVDKSNR	LLLQQVSLPY	IPGNYTVSVS
1330	1340	1350	1360	1370	1380
GEGCVYAQTT	LRYNVPLEKQ	QPAFALKVQT	VPLTCNNPKG	QNSFQISLEI	SYMGSRPASN
1390	1400	1410	1420	1430	1440
MVIADVVMLS	GFIPLKPTVK	KLERLGHVSR	TEVTTNNVLL	YLDQVTNQTL	SFSFIQQDI
1450	1460	1470			
PVKNLQPAIV	KVYDYYETDE	VAFAEYSSPC	SSDDQNV		

FIG. 9B

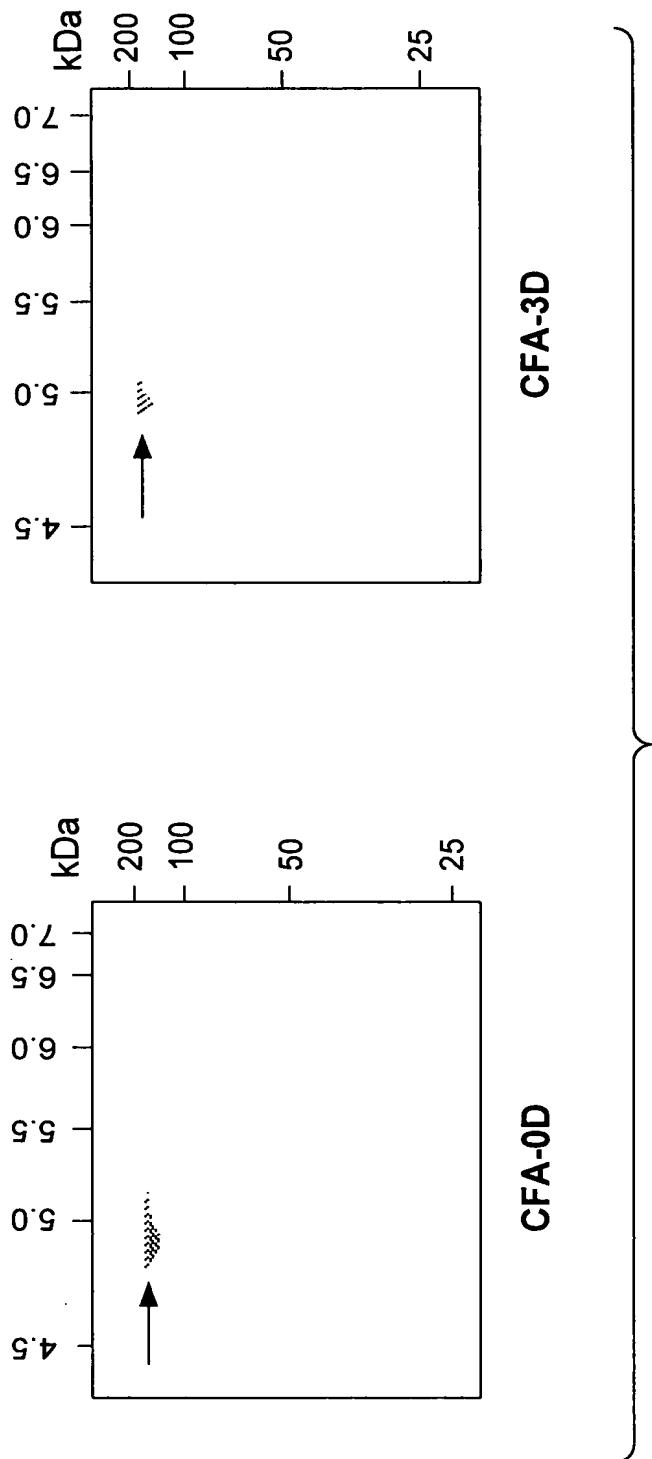


FIG. 10

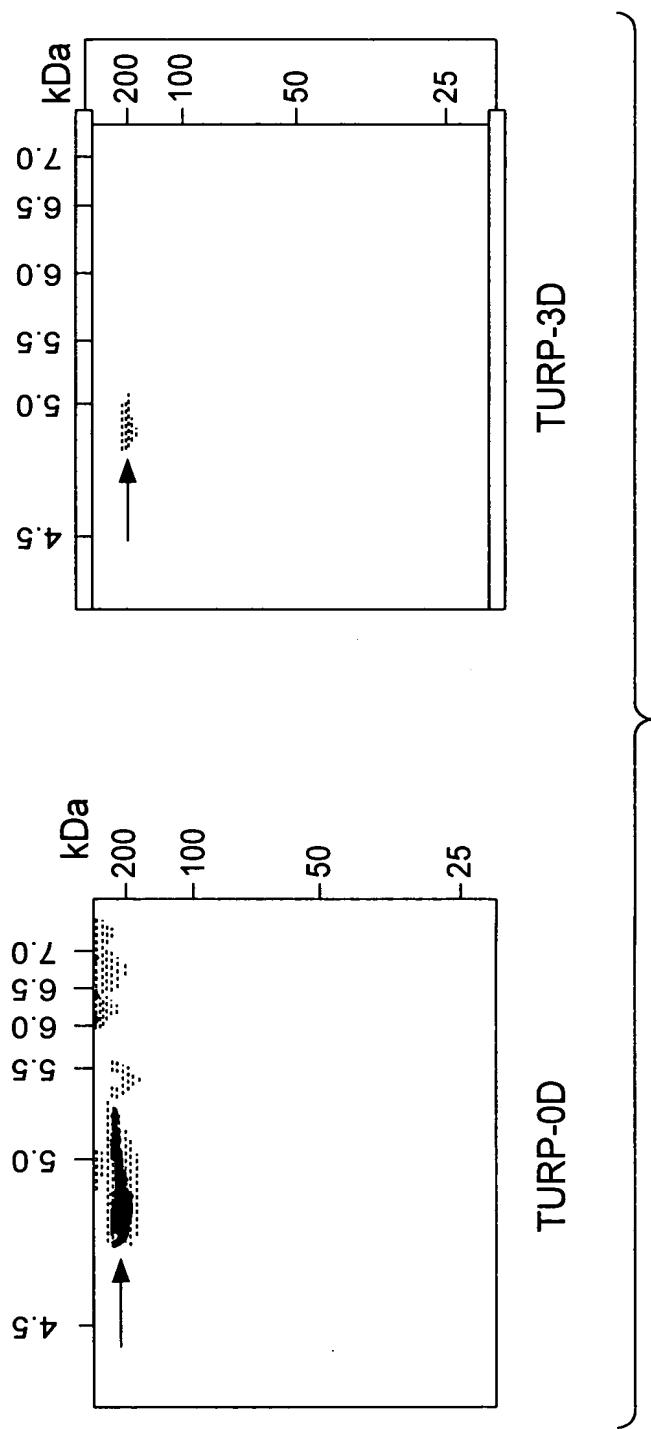
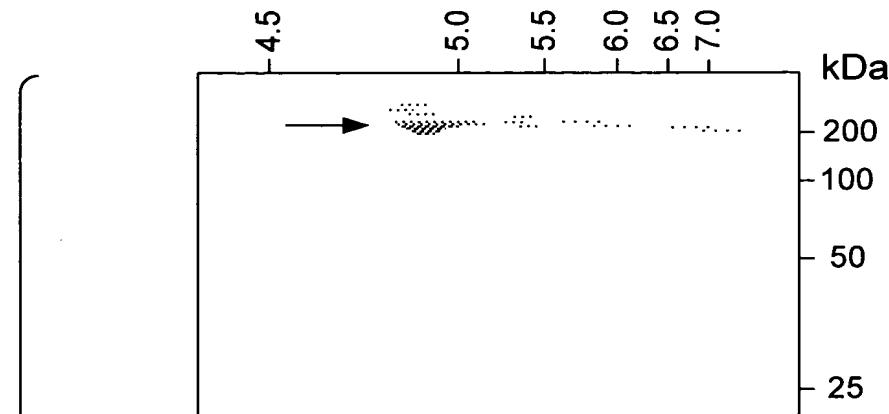


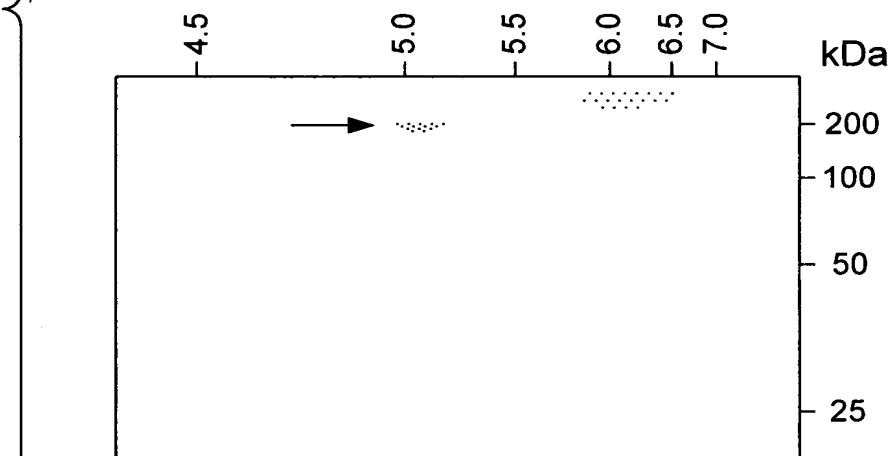
FIG. 11

**Western blot immunodetection of our protein serum level in rat after treatment of IL-6 in vivo.**



**IL6-0D:**

Serum sample obtained just before the rat received the first dose of IL-6.



**IL6-1D:**

Serum sample obtained 1 day after the rat received the first dose of IL-6.

F I G. 12